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DAN E. ARNETT
CHIEF OF STAFF

May 11, 2005

Mr. Charles L.A. Terreni
Chief Clerk/Administrator
South Carolina Public Service Commission
101 Executive Center Dr., Suite 100
Columbia, SC 29210

SO PUBLIC SERVICE
COMMISSION
2005 MAY 11 PM 5:04
1987-2005

Re: Carolina Power & Light Company dba Progress Energy Carolinas, Inc. -
Annual Review of Base Rates for Fuel Costs.
Docket No. 2005-1-E

Dear Mr. Terreni:

Enclosed for filing please find the original and twenty-six (26) copies of the Direct Testimony of A.R. Watts and Jacqueline R. Cherry in the above referenced matter. Please date stamp the extra copy enclosed and return it to me via our courier.

Also, we have served same on all parties of record and enclose a Certificate of Service to that effect.

Please let me know if you have any questions.

Sincerely,

Wendy B. Cartledge

Wendy B. Cartledge

WBC/mg

cc: Len S. Anthony, Esquire
Scott Elliott, Esquire
Thomas S. Mullikin, Esquire
Garrett A. Stone, Esquire

BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA
DOCKET NO. 2005-1-E

IN RE: Carolina Power & Light Company)
 d/b/a Progress Energy Carolinas, Inc.)
 Annual Review of Base Rates for)
 Fuel)
_____)

CERTIFICATE OF SERVICE

This is to certify that I, Rena Grant, an employee with the Office of Regulatory Staff, have this date served one (1) copy of the **Direct Testimony of A.R. Watts and Jacqueline R. Cherry** in the above-referenced matter to the person(s) named below via electronic mail and by causing said copy to be deposited in the United States Postal Service, first class postage prepaid and affixed thereto, and addressed as shown below:

Len S. Anthony, Esquire
Progress Energy Services Company
PO Box 1551/PEB 17A4
Raleigh, NC 27602
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Scott Elliott, Esquire
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A handwritten signature in cursive script, reading "Rena Grant". The signature is written in black ink and is positioned above a horizontal line.

Rena Grant

May 11, 2005
Columbia, South Carolina

173939

**THE OFFICE OF REGULATORY STAFF
DIRECT TESTIMONY AND EXHIBITS
OF**

A. R. Watts



2005 JUL 11 PM 5:04
SC ELECTRICITY
COMMUNICATIONS

**DOCKET NO. 2005-1-E
Carolina Power & Light Company dba Progress
Energy Carolinas, Inc. - Annual Review of Base
Rates for Fuel Costs Annual Review**

**DIRECT TESTIMONY OF
A.R. WATTS
ON BEHALF OF
THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF
DOCKET NO. 2005-1-E**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND
OCCUPATION.**

My name is A.R. "Randy" Watts. My business address is 1441 Main Street, Suite 300, Columbia, South Carolina 29201. I am employed by the State of South Carolina as Program Manager of the Electric Department for the Office of Regulatory Staff ("ORS").

**Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND
EXPERIENCE.**

A. I received a Bachelor of Science Degree in Electrical Engineering from the University of South Carolina in Columbia in 1976. I was employed at that time by the Public Service Commission of South Carolina ("Commission") as a Utilities Engineer in the Electric Department and was promoted to Chief of the Electric Department in August 1981. Subsequent to internal Commission restructuring, my position was designated Chief of Electric in October 1999. I remained in that role until transferring to my current position with the Office of Regulatory Staff in January 2005. I have testified on numerous occasions before the Commission in conjunction with fuel clause, territorial assignment, Siting Act, complaint and general rate proceedings.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
2 **PROCEEDING?**

3 **A.**The purpose of my testimony is to set forth the Office of Regulatory
4 Staff findings and recommendations resulting from our examination of
5 Progress Energy Carolinas, Inc. ("PEC" or "Company") fuel expenses and
6 power plant operations used in the generation of electricity to meet customer
7 requirements.

8 **Q. WHAT AREAS WERE ENCOMPASSED IN YOUR REVIEW OF THE**
9 **COMPANY'S FUEL EXPENSES AND PLANT OPERATIONS?**

10 **A.**First, ORS reviewed the Company's responses to our Data Request
11 containing thirty-eight questions. In preparation for this proceeding ORS
12 reviewed the Company's monthly fuel reports including power plant
13 performance data, major unit outages, and generation statistics. Comparisons
14 and analysis of actual to original estimates were performed for both
15 megawatt-hour sales and fuel costs. ORS analyzed the Company's fuel cost
16 projections and reviewed the Adjustment for Fuel Costs Rider.

17 **Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF**
18 **THE COMPANY'S PROPOSAL IN THIS PROCEEDING?**

19 **A.**ORS met with various representatives of the Company including fuel
20 procurement, plant operations, and resource planning to discuss the
21 Company's procurement activities and policies, plant performance and
22 operations, and forecasting methodologies and practices.

1 Also on a daily basis, ORS keeps abreast of the coal industry including
2 transportation through industry and governmental publications regarding
3 activities in the coal and related markets.

4 **Q. DID ORS EXAMINE THE COMPANY'S PLANT OPERATIONS FOR**
5 **THE REVIEW PERIOD?**

6 **A.**Yes. ORS reviewed the Company's operation of its generating
7 facilities, with special attention to the nuclear plant operations to determine if
8 the Company made reasonable efforts to minimize fuel costs. The review
9 period includes the historical time from January 2004 through March 2005
10 and the projected time from April 2005 through June 2006. The review period
11 was modified from the previous twelve months to accommodate the need for
12 judicial economy. As shown by Exhibit ARW-1, ORS reviewed the
13 availability of the Company's major power plants. Page one of Exhibit ARW-
14 1 shows the monthly availability of the Company's generating units stated in
15 percentages. The capacity factors on page two of Exhibit ARW-1 indicate the
16 monthly utilization of each unit in producing power.

17 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF PLANT**
18 **AVAILABILITY AND HOW IT IS USED IN YOUR EVALUATION AS**
19 **REPRESENTED ON YOUR EXHIBIT ARW-2.**

20 **A.**Exhibit ARW-2 shows the Company's major Fossil and Nuclear Units
21 summary of outages for the review period. Generation Units with zero
22 availability as well as those Units having months with less than 100%
23 availability led us to investigate the reasons for such occurrences. As shown

1 on Exhibit ARW-2, ORS obtained and summarized information from
2 Company outage reports explaining the various reasons for the level of
3 availability or outages. As an example, Exhibit ARW-1 shows Brunswick
4 Unit 1 had zero availability in March 2004, and Exhibit ARW-2 provides the
5 explanation for the plant not being available. For this example, the plant was
6 off line due to a refueling outage.

7 **Q. WOULD YOU EXPLAIN HOW THE OTHER OUTAGES ARE**
8 **REPRESENTED ON EXHIBIT ARW-2?**

9 **A.** Yes. This Exhibit provides explanations for major fossil unit outages
10 in excess of 100 hours, as well as all nuclear plant outages during the review
11 period. Although not included in this Exhibit, fossil outages of less than 100
12 hours were also reviewed and found to be reasonable by ORS.

13 **Q. PLEASE ADDRESS THE OUTAGES AT THE COMPANY'S THREE**
14 **NUCLEAR STATIONS.**

15 **A.** Exhibit ARW-2 page 2 shows the duration of the outages at the
16 Company's three nuclear stations along with the cause and corrective action to
17 restore each to service. ORS found that the Company took appropriate
18 corrective action with respect to these outages, and there were no "NRC" fines
19 associated with these outages. The four units combined achieved an overall
20 93.0% capacity factor for the review period which included full or partial
21 refueling outages at all of these units.

1 **Q. WHAT WERE THE RESULTS OF YOUR ANALYSIS OF THE**
2 **COMPANY'S PLANT OPERATIONS FOR THE PERIOD UNDER**
3 **REVIEW?**

4 **A.**ORS's review of the Company's operation of its generating facilities
5 resulted in our conclusion that the Company made reasonable efforts to
6 maximize unit availability and minimize fuel costs.

7 **Q. DID ORS REVIEW THE GENERATION MIX UTILIZED BY THE**
8 **COMPANY DURING THE REVIEW PERIOD?**

9 **A.**Yes. Exhibit ARW-3 shows the generation mix for the review period
10 by generation type. As shown in this Exhibit, the higher cost combined-cycle
11 units at Richmond County contributed higher percentage generation during
12 the summer or peak months and lower percentage generation during the non-
13 summer period.

14 **Q. WHY DID YOU REFER TO THE COMBINED-CYCLE UNITS AS**
15 **HAVING HIGHER COSTS?**

16 **A.**Exhibit ARW-4 shows PEC's average fuel costs by major generating
17 plant on the Company's system for the review period and the megawatt-hours
18 produced by these plants. ORS' review reveals the lowest average fuel cost of
19 0.43 cents per kilowatt-hour at the Robinson Nuclear Station and the highest
20 average period fuel cost of 5.91 and 9.93 cents at the combined-cycle and
21 combustion turbine Richmond County gas-fired plant. The Company utilizes
22 economic dispatch which generally tends to follow the average fuel cost with
23 the lowest units being dispatched first.

1 **Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY'S**
2 **FORECAST?**

3 **A.** Yes. As shown in Exhibit ARW-5, the Company's actual megawatt-
4 hour sales versus forecasted sales varied by 2.55% during the review period.
5 In addition, Exhibit ARW-6 shows the monthly variance between projected
6 and actual fuel cost factors, and provides the cumulative variance of 17.65%.

7 **Q. DID ORS REVIEW ADDITIONAL INFORMATION IN**
8 **DETERMINING THE REASONABLENESS OF THE COMPANY'S**
9 **FORECAST?**

10 **A.** Yes. ORS reviewed the forecasted maintenance schedules for the
11 Company's major generating units as well as the Company's fuel price
12 forecast for Nuclear, Coal and Natural Gas. ORS also reviewed the
13 Company's forecast computer modeling inputs and results utilized in
14 projecting fuel costs. The computer model used by PEC is widely accepted
15 and utilized by numerous utility companies throughout the country for fuel
16 cost projections. Based on our review, ORS believes PEC's forecasting model
17 is reasonable and appropriate.

18 **Q. WHAT OTHER INFORMATION HAS ORS REVIEWED IN MAKING**
19 **ITS DETERMINATIONS IN THIS PROCEEDING?**

20 **A.** Exhibit ARW-7 shows the ending balances of over and under
21 collections of fuel costs beginning December 1979. The Company has
22 experienced both over and under recovery balances throughout the
23 approximately twenty-five year period.

1 **Q. WHAT OTHER SOURCES OF INFORMATION DOES ORS USE IN**
2 **DETERMINING THE REASONABLENESS OF A UTILITY'S**
3 **REQUEST FOR A FUEL COMPONENT?**

4 **A.** ORS routinely 1) reviews private and public industry publications as
5 well as those available on the Energy Information Administration's (EIA)
6 website; 2) conducts meetings with Company personnel; 3) conducts meetings
7 with representatives of large industrial energy consumers; 4) attends industry
8 conferences; and 5) reviews information as filed monthly by electric
9 generating utilities on Form 423 with the Federal Energy Regulatory
10 Commission. An example of EIA data reviewed is included on Exhibit ARW-
11 8, which shows the upward trend, particularly for Central Appalachia coal, of
12 the average weekly coal commodity spot prices over the three year period
13 ending April 29, 2005. PEC generally obtains its coal from the Central
14 Appalachia region.

15 **Q. DOES ORS HAVE A RECOMMENDATION FOR THE FUEL**
16 **COMPONENT IN THIS PROCEEDING?**

17 **A.** Yes. ORS recommends the fuel component in this proceeding be set at
18 2.350 cents per kilowatt-hour for the period July 2005 through June 2006.

19 **Q. PLEASE EXPLAIN THE BASIS FOR YOUR PROPOSED BASE FUEL**
20 **LEVEL COMPONENT.**

21 **A.** Our analysis indicates the major driver for the upward pressure on fuel
22 costs is the significant increases in delivered cost of coal. In addition, the
23 significant level of under-recovery in the cumulative account balance further

1 exacerbates the pressure to increase the base fuel level. As previously
2 mentioned the Company's average fuel cost projections compared to actual
3 experience for the fifteen month review period shows a variance of 17.65%
4 under estimate. One of the contributing factors was the Company's prior fuel
5 review hearing commenced at the early stages of these unprecedented coal
6 and transportation cost increases which caused this element to not be included
7 in the projections for this review period. Another contributor was the
8 extension of the review period in order to allow more time for analysis and
9 review of the issues which resulted in the previously approved lower base fuel
10 level remaining in effect for a longer period of time. Exhibit ARW-9 shows
11 the Company's average total cost of coal per ton for twelve month periods
12 ending June 2006, 2007 and 2008. This Exhibit indicates increasing costs over
13 the first two years followed by a decrease in the final year.

14 During our review and examination of Progress Energy Carolinas'
15 projected fuel costs for July 2005 through June 2006, ORS became aware of
16 certain errors in the application of the 10% surcharge for Norfolk and
17 Southern freight rates in 2006, and in the application of the BTU premium on
18 coal costs. The Company concurred with these findings and has agreed to
19 make appropriate revisions to their testimony and exhibits through witnesses
20 Coats and Barkley. The net effect of these corrections will be to lower the
21 total fuel cost projections by \$21,276,420 on a system basis which reduces the
22 South Carolina retail portion by \$2,925,507. Also through our review it was
23 determined that the Company included adders for both the winter and non-

1 winter periods to the industry standard projected costs for natural gas for the
2 twelve months ending June 2006. The Company's rationale for incorporating
3 these adders was the apparent under estimates during periods of high
4 volatility. ORS is not convinced at this time that a deviation from the
5 projections supplied by established industry standard groups is appropriate at
6 this time and therefore recommends removal of the \$12,810,000
7 corresponding to these adders. Although there does appear to be some
8 correlation, the projections have been both above and below the actual cost,
9 which is to be expected. These adjustments to correct the forecast error for
10 coal and freight costs and the gas cost adder are shown on Exhibit ARW-10
11 along with the effective lowering of PEC's average projected fuel cost from
12 2.238 cents per kWh to 2.175 cents per kWh.

13 The ORS Auditing Department made several adjustments to actual
14 fuel costs totaling \$2,042,363 (on a South Carolina retail basis) which is a
15 reduction to the cumulative recovery amount as of June 2005 and results in an
16 under-recovered balance of \$39,441,353, as reflected on ORS Audit Exhibit
17 JRC-7. The cumulative Audit Department adjustment is also reflected on
18 Exhibit ARW-10.

19 **Q. DOES ORS HAVE A RECOMMENDATION REGARDING**
20 **TREATMENT OF THIS LEVEL OF UNDER RECOVERY?**

21 **A.** Yes. ORS recommends that an amount equal to the under recovery be
22 levelized over a three year period. This recommendation is based on several
23 factors. As I discussed previously, the Company's projected total average coal

1 costs for the periods ending June 2006 and June 2007 show an upward trend
2 followed by a decrease for the June 2008 period which is below the projection
3 for the June 2006 time frame. ORS's recommendation will help stabilize the
4 factor and tend to minimize fluctuations while affording the opportunity to
5 review costs and operational data at succeeding fuel review proceedings.

6 While Ors recognizes that S.C. Code Ann. Section 58-27-865 (B)
7 indicates that any under recovery should be recovered during the next twelve
8 months, ORS also recognizes that the Commission previously allowed an
9 amortization of an under recovery. *See* Commission Order No. 2001-397
10 issued in Docket No. 2001-2-E, SCE&G – Annual Review of Base Rates for
11 Fuel Costs. In addition, ORS is charged with the duty to represent the public
12 interest of South Carolina pursuant to S.C. Code Section 58-4-10(B) (added
13 by Act 175), and ORS believes such a three year levelizing period would
14 balance concerns of the using public while preserving the financial integrity of
15 the Company. ORS also believes this levelization period would not inhibit
16 economic development.

17 ORS also recommends that the first dollars recovered in the
18 succeeding twelve months beginning July 2005 be applied to the under
19 recovery so that in the next fuel proceeding for PEC and under recovery will
20 be for the period July 2005 to June 2006. This will serve to protect the
21 integrity of the statutory scheme as well as the financial integrity of the
22 Company.

1 For these reasons ORS recommends that an amount equal to the under
2 recovery as reflected on Audit Exhibit JRC-7 and Exhibit ARW-10 be
3 levelized over a three year period.

4 **Q. DO YOU HAVE A RECOMMENDATION REGARDING THE**
5 **COMPANY'S FUEL COST RIDER?**

6 **A.** Yes. Exhibit ARW-11 incorporates revisions to PEC's current
7 Adjustment For Fuel Costs Rider which reflect language that complies with
8 the latest version of the fuel cost statute which was modified during the 2004
9 Legislative session. The changes were made to paragraphs (B) and (C) and
10 cover at the end to confirm the controlling statute in case of any conflict with
11 the Rider itself. ORS recommends this revised/updated version for approval
12 by the Commission to more accurately reflect the language in the statute.

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A.** Yes, it does.

**SOUTH CAROLINA
OFFICE OF REGULATORY STAFF**

**PROGRESS ENERGY CAROLINAS
ANNUAL REVIEW OF BASE RATES FOR FUEL COST
ACTUAL REVIEW PERIOD: JANUARY 1, 2004 – MARCH 31, 2005**

DOCKET NO. 2005-1-E

A. RANDY WATTS TESTIMONY

EXHIBIT INDEX

<u>EXHIBIT NO.</u>	<u>EXHIBIT TYPE</u>	<u>PREPARED BY</u>
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ARW-1	Power Plant Performance Data Report – Availability/Capacity Factors	ORS
ARW-2	Fossil/Nuclear Unit Outage Report (100 Hrs. or Greater Duration) for Progress Energy Carolinas, Inc.	ORS
ARW-3	Generation Mix Report (January 2004 – March 2005) for Progress Energy Carolinas, Inc.	ORS
ARW-4	Generation Statistics for Major Plants (January 2004 – March 2005) for Progress Energy Carolinas, Inc.	ORS
ARW-5	SC Retail Comparison of Estimated to Actual Energy Sales for Progress Energy Carolinas, Inc.	ORS
ARW-6	SC Retail Comparison of Estimated to Actual Fuel Cost for Progress Energy Carolinas, Inc.	ORS
ARW-7	History of Cumulative Recovery Account Report for Progress Energy Carolinas, Inc.	ORS
ARW-8	Average Weekly Coal Commodity Spot Prices	Platts Coal Outlook (From EIA website)
ARW-9	Progress Energy Carolinas, Inc. Forecasted Coal Costs	ORS
ARW-10	Collection of Base Fuel Component for Progress Energy Carolinas, Inc.	ORS
ARW-11	Fuel Cost Rider	ORS

South Carolina
Office of Regulatory Staff
Power Plant Performance Data Report
Availability Factors (Percentage) for
Progress Energy Carolinas, Inc.

PLANT	MW	JAN 2004	FEB 2004	MAR 2004	APR 2004	MAY 2004	JUN 2004	JUL 2004	AUG 2004	SEP 2004	OCT 2004	NOV 2004	DEC 2004	JAN 2005	FEB 2005	MAR 2005
UNIT RATING																
BRUNSWICK	1	938	99.5	92.5	0.0	81.6	100.0	98.3	97.8	83.3	100.0	97.5	96.8	100.0	100.0	100.0
BRUNSWICK	2	900	97.7	100.0	98.9	98.5	90.0	96.2	90.9	90.7	99.7	99.8	99.2	100.0	100.0	12.6
HARRIS	1	900	100.0	100.0	100.0	96.7	57.9	100.0	100.0	100.0	100.0	48.3	100.0	100.0	100.0	100.0
ROBINSON	2	710	100.0	100.0	100.0	62.9	11.2	100.0	100.0	100.0	100.0	93.7	100.0	100.0	100.0	100.0
NUCLEAR TOT		3448	99.3	98.1	74.7	84.9	64.8	98.6	97.2	93.5	99.9	84.8	99.0	100.0	100.0	78.2
MAYO	1	745	100.0	98.7	95.8	97.7	97.7	99.8	96.8	99.7	100.0	100.0	99.6	100.0	100.0	100.0
ROXBORO	2	670	98.5	83.5	99.8	53.3	69.6	97.3	90.3	99.7	95.9	88.7	91.6	100.0	100.0	35.6
ROXBORO	3	707	94.4	100.0	99.9	99.9	85.7	99.8	99.9	100.0	92.9	100.0	99.9	100.0	100.0	100.0
ROXBORO	4	700	99.8	99.7	100.0	100.0	82.0	98.8	96.0	94.7	100.0	100.0	100.0	100.0	100.0	100.0
FOSSIL TOTALS		2822	98.2	95.5	98.9	87.7	83.8	98.9	95.8	98.5	97.2	97.2	97.8	100.0	100.0	83.9
RICHMOND	7	185	100.0	66.9	0.0	2.2	58.3	100.0	99.3	100.0	95.2	87.4	98.8	100.0	100.0	58.1
RICHMOND	8	185	100.0	46.4	0.0	2.2	62.6	95.7	100.0	99.5	94.1	93.4	98.6	100.0	100.0	62.4
RICHMOND	ST	189	100.0	66.9	0.0	2.2	58.3	99.2	99.0	100.0	95.2	93.4	98.8	100.0	100.0	61.5
CC TOTALS		559	100.0	60.1	0.0	2.2	59.7	98.3	99.4	99.8	94.8	91.4	98.7	100.0	100.0	60.7

Note 1: CC designates Combined-Cycle units

South Carolina
Office of Regulatory Staff
Power Plant Performance Data Report
Capacity Factors (Percentage) for
Progress Energy Carolinas, Inc.

PLANT	MW	LIFE	YEAR	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	Avg.	
																					RATING
BRUNSWICK	1	938	67.5	100.8	92.7	99.6	86.3	0.0	87.7	109.3	106.5	105.5	87.2	108.7	105.8	109.6	106.1	101.6	97.9	102.2	94.3
	2	900	65.3	98.9	98.2	100.2	103.5	101.9	100.8	91.7	96.4	91.5	91.4	100.1	101.2	99.4	99.9	97.4	87.8	9.6	91.5
	1	900	84.0	91.8	88.7	104.0	103.9	103.3	99.0	56.5	101.2	100.7	101.0	101.6	48.4	41.5	103.6	103.3	103.8	103.5	91.7
	2	710	74.1	103.5	92.2	105.8	105.9	105.4	65.7	6.3	101.9	101.5	102.1	103.3	96.6	105.4	106.3	106.4	106.4	104.3	94.9
NUCLEAR TOT	3448		98.5	93.0	102.2	99.4	75.3	89.5	69.7	101.5	99.8	95.0	103.5	87.7	88.3	103.9	101.9	98.6	78.8	93.0	
MAYO	1	745		74.1	81.0	77.9	69.1	71.1	78.2	73.1	75.9	75.9	70.1	70.7	72.6	71.7	71.7	67.9	70.0	81.1	73.8
	2	670		67.0	79.2	72.0	80.8	41.1	60.2	60.5	69.4	62.2	59.5	68.8	79.0	71.5	71.5	78.7	77.1	31.6	66.1
	3	707		69.6	69.6	79.0	70.2	71.5	69.4	72.4	78.5	77.3	63.9	69.0	49.6	65.3	65.3	65.1	61.2	74.7	69.1
	4	700		68.1	74.0	73.5	66.4	68.7	63.9	72.6	74.1	66.3	70.6	65.5	48.5	65.9	65.9	63.7	61.8	76.4	67.5
FOSSIL TOT	2822		69.8		76.0	75.7	71.5	63.5	68.2	69.8	74.6	70.6	66.2	68.5	62.4	68.6	68.7	67.4	66.6	69.2	
RICHMOND	7	185		24.2	35.5	24.8	0.0	0.3	35.4	36.8	41.7	62.1	27.9	1.7	0.2	24.3	24.3	37.7	15.1	38.2	25.4
	8	185		23.5	36.0	17.7	0.0	0.1	37.6	33.4	54.9	51.0	18.3	2.6	1.2	28.8	28.8	37.9	14.9	40.0	25.0
	ST	189		28.0	43.5	26.0	0.0	0.0	43.3	42.5	56.5	64.5	24.9	2.4	0.4	31.8	31.8	43.3	18.4	43.8	29.4
CC TOTALS	559		25.3		38.4	22.9	0.0	0.1	38.8	37.6	51.1	59.2	23.7	2.2	0.6	28.3	28.3	39.7	16.1	40.7	26.6

THE LIFETIME NUCLEAR UNIT CAPACITY FACTORS ARE THROUGH DECEMBER 2004.

Note1: CC designates Combined-Cycle units

South Carolina
Office of Regulatory Staff
Fossil Unit Outage Report
(100 Hrs or Greater Duration) for
Progress Energy Carolinas, Inc.

UNIT	DATE OFF	DATE ON	HOURS	TYPE	REASON FOR OUTAGE	CORRECTIVE ACTION
Roxboro 2	04/17/04	05/04/04	421.00	Scheduled	Boiler Overhaul	N/A
Roxboro 2	03/12/05	04/01/05	479.18	Scheduled	Turbine Overhaul	N/A

**South Carolina
Office of Regulatory Staff
Nuclear Unit Outage Report for
Progress Energy Carolinas, Inc.**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	REASON FOR OUTAGE	CORRECTIVE ACTION
Brunswick 1	02/28/04	04/02/04	831.93	Scheduled	Refueling	N/A
Brunswick 1	08/14/04	08/18/04	97.22	Forced	Malfunction of Circuit Breaker	Switchyard Breaker Repaired
Brunswick 2	05/29/04	05/31/04	60.42	Scheduled	Leaking Drywell Valve	Drywell Valve Repaired
Brunswick 2	07/29/04	08/02/04	83.12	Forced	Leaking Drywell Relief Valve	Drywell Relief Valve Repaired
Brunswick 2	03/04/05	04/01/05	649.98	Scheduled	Unit Shutdown for Refueling	N/A
Harris 1	05/06/04	05/07/04	24.00	Forced	Card Failure on Control Rod Drive System	Cause of reactor trip identified and repaired; extended outage to perform scheduled repairs
Harris 1	05/07/04	05/19/04	289.42	Scheduled	Steam Generator Tube Leaks	Repaired tube Leaks in conjunction w/forced outage
Harris 1	10/15/04	11/17/04	780.60	Scheduled	Refueling	N/A
Robinson 2	04/20/04	05/28/04	924.60	Scheduled	Refueling	N/A
Robinson 2	10/13/04	10/14/04	47.32	Forced	Reactor Coolant System Valve Leak	Packing on valve was repaired

South Carolina
Office of Regulatory Staff
Generation Mix Report (January 2004 – March 2005) for
Progress Energy Carolinas, Inc.

<u>MONTH</u>	<u>PERCENTAGE</u>				
	<u>FOSSIL</u>	<u>NUCLEAR</u>	<u>COMBUSTION TURBINE</u>	<u>COMBINED CYCLE</u>	<u>HYDRO</u>
2004					
January	50.1	45.3	0.7	2.8	1.1
February	52.0	44.3	0.5	1.7	1.5
March	57.4	41.0	0.2	0.0	1.4
April	49.3	48.9	0.5	0.0	1.3
May	57.2	34.9	3.7	3.2	1.0
June	47.6	47.5	1.1	2.9	0.9
July	48.9	44.3	2.2	3.7	0.9
August	48.8	44.4	1.4	4.6	0.8
September	41.6	52.9	1.3	2.0	2.2
October	47.8	49.7	0.7	0.2	1.6
November	49.2	48.5	0.5	0.1	1.7
December	46.4	49.0	0.6	2.2	1.8
2005					
January	46.7	47.8	1.1	3.0	1.4
February	50.0	47.2	0.3	1.3	1.2
March	54.1	39.6	1.2	3.3	1.8

**South Carolina
Office of Regulatory Staff
Generation Statistics for Major Plants
(January 2004 – March 2005) for
Progress Energy Carolinas, Inc.**

PLANT	TYPE FUEL	AVERAGE FUEL COST (CENTS/KWH*)	GENERATION (MWH)
Harris	Nuclear	0.45	7,562,635
Robinson 2	Nuclear	0.43	7,362,703
Brunswick	Nuclear	0.45	14,808,057
Robinson 1	Coal	2.06	1,675,177
Weatherspoon	Coal	2.64	774,646
Asheville	Coal	2.35	2,753,432
Roxboro	Coal	2.27	17,804,752
Sutton	Coal	2.59	3,482,835
Cape Fear	Coal	2.38	2,247,058
Mayo	Coal	2.38	5,041,685
Lee	Coal	2.10	2,276,829
Richmond Cty	Gas CC/CT	5.91/9.93	2,244,149

() The average fuel costs for coal-fired plants include oil and/or gas cost for start-up and flame stabilization.*

South Carolina
Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Energy Sales
for Progress Energy Carolinas, Inc.

	2005																
	2004	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>TOTAL</u>
[1] ESTIMATED SALES [MWH]		619,728	576,772	566,635	540,660	548,217	609,959	681,256	694,089	640,202	566,611	532,802	557,801	597,234	581,783	571,218	8,884,967
[2] ACTUAL SALES [MWH]		630,892	626,547	601,056	553,396	532,229	685,898	700,845	668,186	659,502	570,907	511,511	596,409	616,100	606,934	557,384	9,117,796
[3] AMOUNT DIFFERENCE [1]-[2]		-11,164	-49,775	-34,421	-12,736	15,988	-75,939	-19,589	25,903	-19,300	-4,296	21,291	-38,608	-18,866	-25,151	13,834	-232,829
[4] PERCENT DIFFERENCE [3]/[2]		-1.77	-7.94	-5.73	-2.30	3.00	-11.07	-2.80	3.88	-2.93	-0.75	4.16	-6.47	-3.06	-4.14	2.48	<u><u>-2.55</u></u>

EXHIBIT ARW-5

South Carolina
Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Fuel Cost
for Progress Energy Carolinas, Inc.

	2004 <u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	2005 <u>JAN</u>	<u>FEB</u>	<u>MAR</u>	PERIOD AVERAGE
[1] ORIGINAL PROJECTION	1.578	1.387	1.435	1.276	1.372	1.540	1.687	1.571	1.280	1.408	1.375	1.390	1.464	1.359	1.404	1.428
[2] ACTUAL EXPERIENCE	1.565	1.367	1.418	1.329	2.716	1.647	1.927	1.957	1.678	1.407	1.632	1.816	1.985	1.615	2.000	1.734
[3] AMOUNT IN BASE	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	1.471	
[4] VARIANCE FROM ACTUAL [1-2]/[2]	0.83%	1.46%	1.20%	-3.99%	-49.48%	-6.50%	-12.45%	-19.72%	-23.72%	0.07%	-15.75%	-23.46%	-26.25%	-15.85%	-29.80%	<u><u>-17.65%</u></u>

EXHIBIT ARW- 6

**South Carolina
Office of Regulatory Staff
History of Cumulative Recovery Account Report
for Progress Energy Carolinas, Inc.**

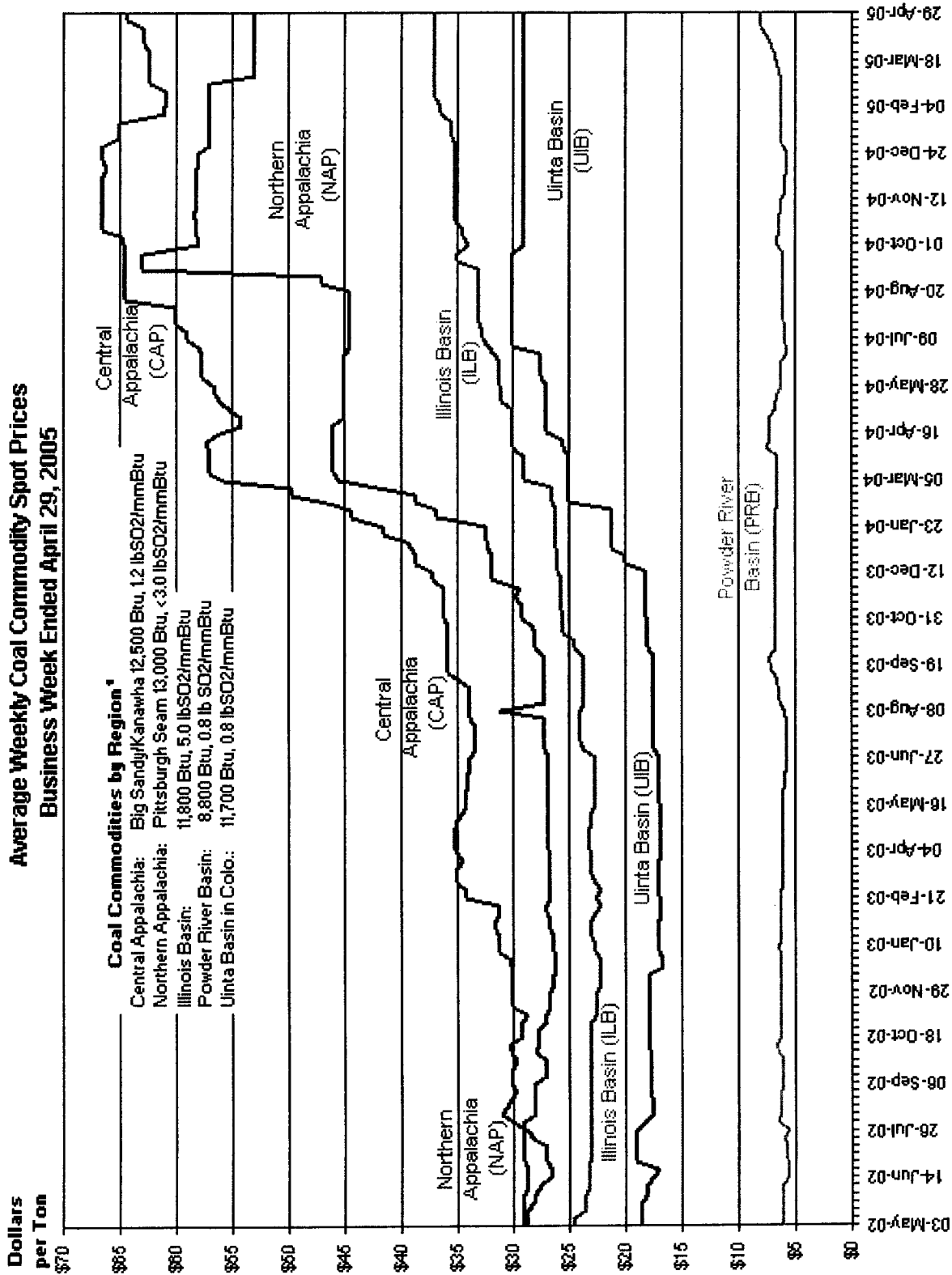
EXHIBIT ARW-7

<u>PERIOD ENDING</u>	<u>OVER (UNDER) \$</u>
March 1979 – Automatic Fuel Adjustment in Effect	
December 1979	1,104,730
September 1980	(12,000,131)
March 1981	(4,060,364)
August 1981	(12,113,832)
March 1982	(935,412)
September 1982	(6,881,796)
March 1983	(2,259,114)
September 1983	(3,264,694)
March 1984	109,270
September 1984	2,172,859
March 1985	(2,317,008)
September 1985	745,913
March 1986	1,972,280
September 1986	(696,805)
March 1987	2,408,354
September 1987	3,310,059
March 1988	(3,964,888)
September 1988	(5,737,541)
March 1989	(8,125,496)
September 1989	(5,875,641)
March 1990	(9,311,149)
September 1990	(658,614)
March 1991	1,403,023
September 1991	4,661,988
March 1992	5,201,112
September 1992	(6,712,920)
March 1993	(9,563,180)
September 1993	0*
March 1994	(1,010,684)
September 1994	1,975,939
March 1995	7,408,161
September 1995	2,011,489
December 1996	186,139
December 1997	(6,212,396)
December 1998	(14,334,022)
December 1999	(17,967,157)**
December 2000	(18,627,471)
December 2001	(9,906,921)
December 2002	(7,393,266)
December 2003	(6,038,891)
March 2005	(27,998,971)

*Eliminated \$14,011,263 per Commission Order No. 93-865

**Reduced by \$6,500,000 per Commission Order No. 1999-324

**Average Weekly Coal Commodity Spot Prices
Business Week Ended April 29, 2005**



* Coal prices shown are for a relatively high-Btu coal selected in each region, for delivery in the "prompt" quarter. The "prompt quarter" is the next calendar quarter, with quarters shifting forward after the 15th of the month preceding each quarter's end.

Source: with permission, selected from listed prices in Platts Coal Outlook, "Weekly Price Survey."

**South Carolina
Office of Regulatory Staff**

**Progress Energy Carolinas, Inc.
Forecasted Coal Costs**

Year Ended	Tons	\$/Ton
June 2006	12,894,800	69.92
June 2007	12,790,921	72.91
June 2008	12,903,018	68.93

South Carolina
Office of Regulatory Staff
Collection of Base Fuel Component
Progress Energy Carolinas, Inc.

EXHIBIT ARW-10

I. Projected Fuel Expense

Cost of Fuel (As Filed)	\$1,220,730,000
Less:	
a. Error in Forecast: Freight Escalation, BTU Premium, Compliance vs. Non-Compliance	(\$21,276,420)
b. Eliminate PEC Gas Cost Adder to Forecast	(\$12,810,800)
Adjusted Cost of Fuel	\$1,186,642,780
System Sales (MWH)	54,546,281
Average Cost (¢/KWH)	<u><u>2.175</u></u>

II. Revenue Difference to be Collected

Under Recovery at June 2005 (As Filed)	\$41,483,716
Accounting Adjustment	(\$2,042,363)
Adjusted Under Recovery	\$39,441,353
Amortize Over 3 yrs	÷ 3
Annual Under Recovery per Year	\$13,147,118
Projected SC Retail Sales (MWH)	7,499,215
Average Cost (¢/KWH)	<u><u>0.175</u></u>

III. Base Fuel Cost per KWH

Projected Fuel Expense	2.175
Under Recovery	0.175
Base Fuel Component (¢/KWH)	<u><u>2.350</u></u>

APPLICABILITY

This adjustment is applicable to and is a part of the Utility's South Carolina retail electric rate schedules.

The Public Service Commission has determined that the costs of fuel in an amount to the nearest one-thousandth of a cent, as determined by the following formula, will be included in the base rates to the extent determined reasonable and proper by the Commission:

$$F = \frac{E}{S} + \frac{G}{S_1}$$

Where:

F = Fuel cost per kilowatt-hour included in base rate, rounded to the nearest one-thousandth of a cent.

E = Total projected system fuel costs:

- (A) Fuel consumed in the Utility's own plants and the Utility's share of fuel consumed in jointly owned or leased plants. The cost of fossil fuel shall include no items other than those listed in Account 151 of the Commission's Uniform System of Accounts for Public Utilities and Licensees and the cost of SO₂ emission allowances recorded in FERC Account 509 (allowance cost). The cost of nuclear fuel shall be that as shown in Account 518 excluding rental payments on leased nuclear fuel and except that, if Account 518 also contains any expense for fossil fuel which has already been included in the cost of fossil fuel, it shall be deducted from this account.

Plus

- (B) Fuel costs related to purchased power (and applicable SO₂ emission allowances) such as those incurred in unit power and limited term power purchases where the fossil fuel costs and applicable SO₂ emission allowances associated with energy purchased are identifiable and are identified in the billing statement. Also the cost of 'firm generation capacity purchases' which are defined as purchases made to cure a capacity deficiency or to maintain adequate reserve levels. "Costs of firm generation capacity purchases" include the total delivered costs of firm generation capacity purchased and excludes generation capacity reservation charges, generation capacity option charges and any other generation capacity charges.

Plus

- (C) Fuel costs related to purchased power (including transmission charges and applicable SO₂ emission allowances), such as short term, economy and other such purchases, where the energy is purchased on an economic dispatch basis, including the total delivered cost of economy purchases of electric power defined as purchases made to displace higher cost generation at a cost which is less than the purchasing Utility's avoided variable costs for the generation of an equivalent quantity of electric power.

Energy receipts that do not involve money payments such as Diversity energy and payback of storage energy are not defined as purchased or interchange power relative to this fuel calculation.

Minus

- (D) The cost of fuel and applicable allowance cost recovered through intersystem sales including the fuel costs and applicable allowance cost related to economy energy sales and other energy sold on an economic dispatch basis.

Energy deliveries that do not involve billing transactions such as Diversity energy and payback of storage are not defined as sales relative to this fuel calculation.

S = Projected system kilowatt-hour sales excluding any intersystem sales.

G = Cumulative difference between jurisdictional fuel revenues billed and fuel expenses at the end of the month preceding the projected period utilized in E and S.

S₁ = Projected jurisdictional kilowatt-hour sales for the period covered by the fuel costs included in E.

The appropriate revenue-related tax factor is to be included in these calculations.

The fuel cost (F) as determined by Public Service Commission of South Carolina is ____ cents per kilowatt-hour, which shall remain in effect until superseded by a subsequent Commission order: Provided that the terms of S.C. Code Ann. Section 58-27-865 shall govern this calculation, and in case of any conflict this statute shall control.

Supersedes Rider No. 39U Effective for bills rendered on and after July 1, 2005